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Indian Standard
ELECTROTECHNICAL VOCABULARY
PART XXIII RADIO TELEGRAPHY AND MOBILE RADIO

(Third Reprint MAY 1984)

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ELECTROTECHNICAL VOCABULARY

PART XXIII RADIO TELEGRAPHY AND MOBILE RADIO

0. FOREWORD

0.1 This Indian Standard (Part XXIII) was adopted by the Indian Standards Institution on 26 October 1967, after the draft finalized by the Electrotechnical Standards Sectional Committee in consultation with the Electronic Equipment Sectional Committee had been approved by the Electrotechnical Division Council.

0.2 A series of standards has been prepared with a view to bringing together the terms relating to radio communications covering different aspects, such as circuits, radiowave propagation, aerials, transmitting and receiving equipment, radio telegraphy and mobile radio, sound and television broadcasting, radio-location and radio-navigation, etc. This standard deals with terms relating to radio telegraphy and mobile radio.

0.3 The definitions contained in this standard have been drawn up with the object of striking a correct balance between absolute precision and simplicity. The principal object of the standard is to provide definitions which are sufficiently clear so that each term is understood with the same meaning by all electrical engineers and it does not, therefore, constitute a treatise on electrical engineering. Thus, it may sometimes be felt that the definitions are not sufficiently precise, do not include all cases, do not take account of certain exceptions or are not identical with those which may be found in other publications designed with other objects and for other readers. Such imperfections, which will be eliminated as far as possible in later editions, are inevitable and should be accepted in the interest of simplicity and clarity.

0.4 This standard is one of a series of Indian Standards on electrotechnical vocabulary. A list of standards in this series is given on P 8.

0.5 This standard largely follows IEC Draft Publication 50 (60), Group 60 'Radio communications' brought out by International Electrotechnical Commission. Assistance has also been derived from B.S. 204 : 1960 'Glossary of terms used in telecommunication (including radio) and electronics' issued by the British Standards Institution.

1. SCOPE

1.1 This standard (Part XXIII) covers terms specially applicable to radio telegraphy and mobile radio.

Note — Other common terms on transmitting and receiving equipment for radio communication are already covered by IS : 1885 (Part XXII)-1967*.

2. RADIO TELEGRAPHY

2.1 **Four-Frequency Diplex Telegraphy** — Frequency-shift telegraphy in which each of the four possible signal combinations corresponding to two telegraph channels is represented by a separate frequency.

2.2 **Keying Filter** — A network inserted in a circuit to reduce the higher frequency components in the keying signal wave-shape thus reducing sideband spread. This action is sometimes called ' signal curbing '.

2.3 **Radio Monitor** — A device for monitoring the quality of radiated signals, for example by recording.

2.4 **Automatic Radio Monitor** — A radio monitor which gives a warning when one or more of the characteristics of the transmitter signal depart from predetermined limits.

2.5 **Signal Comparator** — A device which compares the output signal of a transmitter with the input signal and gives an alarm if the difference exceeds a specified amount.

2.6 **Central Monitoring Position (CMP)**

a) A central position at a radio transmitting station where all signal outputs from transmitters can be checked and compared as required with signal inputs.

b) A central position at a radio receiving station where all receiver outputs can be monitored.

2.7 **Central Control Position (CCP)** — A control position at a radio station from which the transmitters or receivers may be remotely controlled.

2.8 **Two-Tone Detector** — A device which produces outputs of equal magnitude and opposite polarity from the marking and spacing frequencies in frequency change keying and frequency shift keying systems.

2.9 **Recording Unit** — A device which accepts telegraph signals at audio frequency or intermediate frequency and converts them into square pulses of fixed amplitude, capable of operating a teleprinter, undulator, etc.

2.10 **Recording Bridge** — An equipment utilizing a bridge circuit for operating telegraph or monitoring apparatus from a telegraph signal.

2.11 **Spacing Wave** — The wave radiated during the spacing intervals of a telegraphic code.

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*Electrotechnical vocabulary : Part XXII Equipment for radiocommunications transmitting and receiving.

2.12 Marking Wave — The wave radiated when marking signals are being made in accordance with the telegraphic code.

3. LAND MOBILE RADIO

3.1 Land Base Station — A stationary land station providing communication by radio with one or more mobile stations.

Note — A land base station may change its position.

3.2 Land Mobile Station — A station capable of movement and providing communication by radio with another mobile station or base station.

3.3 Single-Frequency Operation — A mobile radio system in which the transmitted frequency is the same for both directions of transmission.

3.4 Two-Frequency Operation — A mobile radio system in which the transmitted frequency is different for the two directions of transmission.

3.5 Reversed-Frequency Operation — In mobile radio systems. A method of operation of a two-frequency system in which a fixed control station communicates with the mobile stations by relaying through the base station, the frequency allocation for transmitting and receiving at the fixed station being the reverse of the allocation at the base station, that is, the same as at each mobile station.

3.6 Talk-Through Facility — An arrangement of a two-frequency system whereby the mobile radio stations communicate with one another via a base station.

3.7 Selective Calling — A system whereby the transmission of a signal code from a base or a mobile station enables a predetermined mobile or base station, or group of such stations, to be called exclusively.

3.8 Spaced-Carrier Operation — A method of operation whereby two or more separated base stations transmit (and receive) the same signals simultaneously on two or more carrier frequencies spaced by a small frequency interval, in order to extend the area effectively covered by the mobile service.

3.9 Simplex Operation — A method of operation whereby transmission between two is made possible alternately in each direction, for example, by means of a manual control.

Note — Simplex operation may use either one or two frequencies in radio communication.

3.10 Duplex Operation — A method of operation whereby transmission between two stations is possible in both directions.

Note — Duplex operation requires two frequencies in radio communication.

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Note — This index has been prepared in accordance with IS : 1275-1958*. Index numbers are clause numbers.

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INTERNATIONAL SYSTEM OF UNITS (SI UNITS)

Base Units

Quantity	*Unit*	*Symbol*
Length	metre	m
Mass	kilogram	kg
Time	second	s
Electric current	ampere	A
Thermodynamic temperature	kelvin	K
Luminous intensity	candela	cd
Amount of substance	mole	mol

Supplementary Units

Quantity	*Unit*	*Symbol*
Plane angle	radian	rad
Solid angle	steradian	sr

Derived Units

Quantity	*Unit*	*Symbol*	*Definition*
Force	newton	N	$1\ N = 1\ kg.m/s^2$
Energy	joule	J	$1\ J = 1\ N.m$
Power	watt	W	$1\ W = 1\ J/s$
Flux	weber	Wb	$1\ Wb = 1\ V.s$
Flux density	tesla	T	$1\ T = 1\ Wb/m^2$
Frequency	hertz	Hz	$1\ Hz = 1\ c/s\ (s^{-1})$
Electric conductance	siemens	S	$1\ S = 1\ A/V$
Electromotive force	volt	V	$1\ V = 1\ W/A$
Pressure, stress	pascal	Pa	$1\ Pa = 1\ N/m^2$

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